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 TI GDNF: a **glial cell line-derived**
neurotrophic factor for **midbrain** dopaminergic
 neurons.
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 AU Lin L F; Doherty D H; Lile J D; Bektesh S; Collins F
 CS Synergen, Inc., Boulder, CO 80301.
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 AB A potent neurotrophic factor that enhances survival of midbrain
 dopaminergic neurons was purified and cloned. Glial cell line-derived
 neurotrophic factor (GDNF) is a glycosylated, disulfide-bonded homodimer
 that is a distantly related member of the transforming growth factor-beta
 superfamily. In embryonic midbrain cultures, recombinant human GDNF
 promoted the survival and morphological differentiation of dopaminergic
 neurons and increased their high-affinity dopamine uptake. These effects
 were relatively specific; GDNF did not increase total neuron or astrocyte
 numbers nor did it increase transmitter uptake by gamma-aminobutyric-
 containing and serotonergic neurons. GDNF may have utility in the
 treatment of Parkinson's disease, which is marked by progressive
 degeneration of midbrain dopaminergic neurons.